BRUHATH BANGALORE MAHANAGARA PALIKE

Rajarajeshwari Nagar Zone

O/o Executive Engineer(Ele), Rajarajeshwari nagar Zone, BBMP, Bangalore

Schedule- B/ Bill of Quantities (BOQ)

Memorandum Showing the Specifications, Quantities and Rates of items to be Executed

Name of the Work-: Providing high intensity illumination to Ayyappa temple junction, Sahithyakoota junction, Bel circle u-turn, Muthyalanagara junction BFW junction and Rajagopal circle of ward No-16 Jalahalli under RR nagara zone. (Others)

Tender Number:- BBMP/2021-22/EL/WORK_INDENT48507

Name of the Contractor:			**M/s Niharik Electricals , Prop. Dilip J**					
SNo	Approved Qty	Item Name	**Sanctioned Est Rates**			**Approved Tender Rates**		
			Unit	Estimate Rate	Total Amount	Rate in Figure	Rate in Words	Total Amount
1	3.072	Part A KSRB 2-2 : Earthwork excavation by manual means for foundation of buildings, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. KSRB 2-2.2 : -d o - in hard soil. No. KBS 2.1 (b) / 2.3.5 (0.8*0.8*1.2) Mtr Per Foundation for Octagonal pole	Cum	449	1379.328	226.0	Rupees Two Hundred and Twenty Six Only	694.00
2	2.704	Part A KSRB 4.2.2 : Providing and laying in position reinforced cement Cum concrete of Design Mix M20 with OPC @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.460 cum, with super plasticisers @ 3 liters confirming to IS 9103-1999 reafirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6	Cum	5659	15301.94	3542.0	Rupees Three Thousand Five Hundred and Forty Two Only	9578.00
3	0.112	Part A KSRB 4-1.3 : Providing and laying in position plain cement concrete Cum of Mix 1:4:8 with OPC @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2	Cum	5102	571.424	2354.0	Rupees Two Thousand Three Hundred and Fifty Four Only	263.65
4	80	Part A KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 550	Kg	71.51	5720.8	70.0	Rupees Seventy Only	5600.00

Executive Engineer (Elec
Rajarajeshwari Nagar Zone,
Bruhat Bangalore Mahanagara Palike

Contractor

EE(ELE-RRN)

	ove Qty	Item Name	Sanctioned Est Rates			Approved Tender Rates		
			Unit	Estimate Rate	Total Amount	Rate in Figure	Rate in Words	Total Amount
5	12	Part A Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/ 60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with W System Power consumption. LED Efficiency> 130lm/w, nominal CRI >75. Luminaire manufacturer should have in- house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source. LED Floodlight 150 W,	Each	10250	123000	6989.0	Rupees Six Thousand Nine Hundred and Eighty Nine Only	83868.00
6	15	Part A Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments. 16 sqmm.	Per Mtr	188	2820	36.0	Rupees Thirty Six Only	540.00
7	32	Part A Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade flexible copper with low conductor confirming to IS:8130-1984 and (Virgin) PVC insulation sheathed suitable for working voltage upto 1100Volts as per IS-694:1990, 3C X 4Sq.mm,	Per Mtr	100	3200	54.0	Rupees Fifty Four Only	1728.00
8	6	Part A Supplying and fixing of solar lux level street light control switch single phase including suitable capacity contactor 3 KW	Each	8400	50400	4361.0	Rupees Four Thousand Three Hundred and Sixty One Only	26166.00
9	6	Part A Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 40 Amps DP.	Each	1336	8016	856.0	Rupees Eight Hundred and Fifty Six Only	5136.00
10	80000	Part A Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete. 16 SWG. (Item No. -5.42.2, Page No.30) (PW,P&IWTD- Ele SR 2019-20)	sq.cms	0.35	28000	0.35	Rupees Zero Only Paise Thirty Five Only	28000.00
11	24	Part A Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. 40x40x6mm,	Per Mtr	255	6120	89.0	Rupees Eighty Nine Only	2136.00

Contractor

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	ve ty	Item Name	Sanctioned Est Rates			Approved Tender Rates		
			Unit	Estimate Rate	Total Amount	Rate in Figure	Rate in Words	Total Amount
	16	Part A Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV. 40 MM	Per Mtr	335	5360	126.0	Rupees One Hundred and Twenty Six Only	2016.00
13	8	Part A Supplying fixing and wiring earth electrode for grounding of lifts, transformers, DG sets etc. using 40mm dia 2.9mm thick 2.5 mtr long GI pipe with GI funnel with mesh and suitable size reducer fixed on the top of the earth electrode. The funnel should be enclosed in a CC chamber of 400x400x400mm with a cast iron cover. The earth electrode shall have staggered holes of 12mm dia and the electrode should be covered 150mm all-round with alternate layers of salt and charcoal from the bottom of the CC chamber. The connection from the electrode is to be established through GI strip using GI bolts and nuts.	No	4150	33200	3654.0	Rupees Three Thousand Six Hundred and Fifty Four Only	29232.00
14	12	Part A Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers. 100 Amps	Each	349	4188	198.0	Rupees One Hundred and Ninety Eight Only	2376.00
15	15000	Part A Supplying and fixing hylum plastic sheet 3mm thick with necessary nitches for fixing switches, regulators etc., and fixing on existing wood or metal box using N.F. screws.	Sq Cm	0.24	3600	0.24	Rupees Zero Only Paise Twenty Four Only	3600.00
16	250	Part A Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975. 4 core 16 sqmm	Mtr	150	37500	85.0	Rupees Eighty Five Only	21250.00
17	250	Part A Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required. In existing trench/duct. 6 sqmm to 16 sqmm	Mtr	11.88	2970	11.88	Rupees Eleven Only Paise Eighty Eight Only	2970.00
18	200	Part A Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) In soil (hard)	Mtr	102	20400	26.0	Rupees Twenty Six Only	5200.00
19	50	Part A Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) Asphalt cutting	Mtr	113	5650	58.0	Rupees Fifty Eight Only	2900.00
20	4	Part A Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.16 sqmm	Each	270	1080	75.0	Rupees Seventy Five Only	300.00
21	8	Part A Supplying and fixing of heavy duty cable glands suitable for UG cable of 1.1 KV class (metal only) 32mm dia	Each	117	936	54.0	Rupees Fifty Four Only	432.00
22	150	Part A Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings /Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 50mm OD / 38mm ID	Mtr	151	22650	85.0	Rupees Eighty Five Only	12750.00
23	16	Part A Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes. 16 sqmm	Each	12.44	199.04	12.44	Rupees Twelve Only Paise Forty Three Only	199.04

Contractor

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ve ty	Item Name	Sanctioned Est Rates			Approved Tender Rates		
		Unit	Estimate Rate	Total Amount	Rate in Figure	Rate in Words	Total Amount
32	Part A Supplying and running GI/Copper conductor for grounding and (along with other wires in conduit system of wiring) using necessary suitable size clamps, nails, guttas/spacers etc. 8 SWG GI Wire	Mtr	19	608	6.0	Rupees Six Only	192.00
25 12	Part A Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.	Each	175	2100	96.0	Rupees Ninety Six Only	1152.00
26 16	Part A Fabricating, supplying and erecting swaged tubular pole of height ...Mtr having three sections, and providing two coats of red oxide paint and finished with two coats of enamelled paint of approved quality and colour and M.S. base plate of suitable size welded at the bottom of the pole(as per IS) and 40mm dia GI / flexible PVC pipe of 1 mtr length fitted to the heavy gauge polycarbonate control box including 5way connector of size 167x125x82mm for 7.5M pole/200x160x98mm for remaining length of pole with front opening cover, with locking arrangements and suitable capacity MCB / DP switch, The pole shall be erected in cement concrete work (1:2:4) including excavation and refilling of planting depth of the pole to the ground level and the coping CC shall be up to 0.6M above ground level as per IS 2713 - 7. 4.1.1) 9Mt (5Mt Hb,165.1mm dia 4.85mm thick x2M Hm, 139.7mm dia 4.50mm thick x 2M Ht,114.3mm dia 3.65mm thick) as per IS 410 SP 32	Each	13200	211200	10998.0	Rupees Ten Thousand Nine Hundred and Ninety Eight Only	175968.00
27 3	Part A Fabricating, supplying and erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec for .....Mtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottom .....mm, top....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 4.2.6) 8 meters - Top 70mm and bottom 135mm dia	Each	12260	36780	9999.0	Rupees Nine Thousand Nine Hundred and Ninety Nine Only	29997.00
28 16	Part A Supplying and fixing telescopic M.S. bracket fabricated by using 0.5m length 4" dia telescopic M. S. pipe, with 2" dia 1.5m long M. S. bracket and are welded with suitable angle, using 6mm thick M. S. sheet, grip bolts & nuts, as required, suitable for 9 to 12 Mtrs. M. S. tubular pole, with necessary two coats of painting, with all other accessories. 14.4.1) Single bracket 1.5 Mtr. Length	Each	1200	19200	564.0	Rupees Five Hundred and Sixty Four Only	9024.00

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	ove Qty	Item Name	Sanctioned Est Rates			Approved Tender Rates		
			Unit	Estimate Rate	Total Amount	Rate in Figure	Rate in Words	Total Amount
29	5	Part A Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency> 130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source. 12.8) LED Streetlight 90 Watts	No	7160	35800	4111.0	Rupees Four Thousand One Hundred and Eleven Only	20555.00
30	5	Part A Wiring for lighting/power circuit using one of PVC insulated 1100V grade, stranded Aluminium wire single core in open or concealed system of wiring. 2.7.1) 4 sqmm	Mtr.	9	45	3.0	Rupees Three Only	15.00
31	90	Part A Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments.1) 1.5 SQMM	Mtr.	20.5	1845	6.0	Rupees Six Only	540.00
32	8	Part A Supplying, and fixing of Hot dip Galvanized M.S.Bracket suitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete. Single Arm Bracket with 1000mm Standard 40/50MM dia	Each	1689	13512	956.0	Rupees Nine Hundred and Fifty Six Only	7648.00
		Sub total -part-A						**492025.69**
33	2200	Part B Supplying and stringing of 1.1KV grade Aerial Bunched Cable Stranded & Compacted Aluminum Phase Conductor, and Stranded Messenger Conductor with all aluminum Alloy, Phase Conductor is insulated with XLPE Compound, insulated Messenger with specified IS-14255:1995 & confirming to GTP of GROUP-A. 1_ 2 X 16 + 1 X 25 SQ.MM	Per Mtr	92	202400	92.0	Rupees Ninety Two Only	202400.00
34	70	Part B Suspension Clamp Assembly 16 to 70 mm (Excluding pole clamp & Eye Hook)	Set	323	22610	145.0	Rupees One Hundred and Forty Five Only	10150.00
35	6	Part B Dead End Clamp/Anchor Clamp Assembly 25 to 95 Sqmm (excluding pole clamps and Eye hook)	Set	304	1824	196.0	Rupees One Hundred and Ninety Six Only	1176.00
36	70	Part B Universal Hook, Bolts & nuts including fixing charges	No	441	30870	156.0	Rupees One Hundred and Fifty Six Only	10920.00
37	70	Part B Piercing connector suitable for 16 Sqmm - 95 Sqmm AB Cable - Street Light Connections including fixing charges	No	224	15680	158.0	Rupees One Hundred and Fifty Eight Only	11060.00

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	ove Qty	Item Name	Sanctioned Est Rates			Approved Tender Rates		
			Unit	Estimate Rate	Total Amount	Rate in Figure	Rate in Words	Total Amount
	70	Part B Supplying and fixing of Pole clamp for LT Cable	Set	314	21980	196.0	Rupees One Hundred and Ninety Six Only	13720.00
		Sub total -part-B			**998716.5**			**249426.00**
		GST Applicable @12% on part-A only						**59043.08**
		Total Amout(Exluding GST)						**741451.69**
		Tender premium						**-25.76%**

Certificate:-

a) I agree to Execute this work at the Rates mentioned above in the Schedule-B/BOQ.
b) I am ready to carry out the work as per the directions of Engineer-in-Charge of Work.
c) I am ready to carry out the work as per the tender terms and conditions.

Seal & Signature of Contractor

Executive Engineer(Ele),
Bruhat Bangalore Mahanagara Palike,
RR Nagar Zone

Contractor

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